

The student builds the projects during the first chapter of each section. The student then uses that project in the majority of experiments and activities that follow.



ELECTRIC RACER

Examples of some of the topics this project is used to study are:

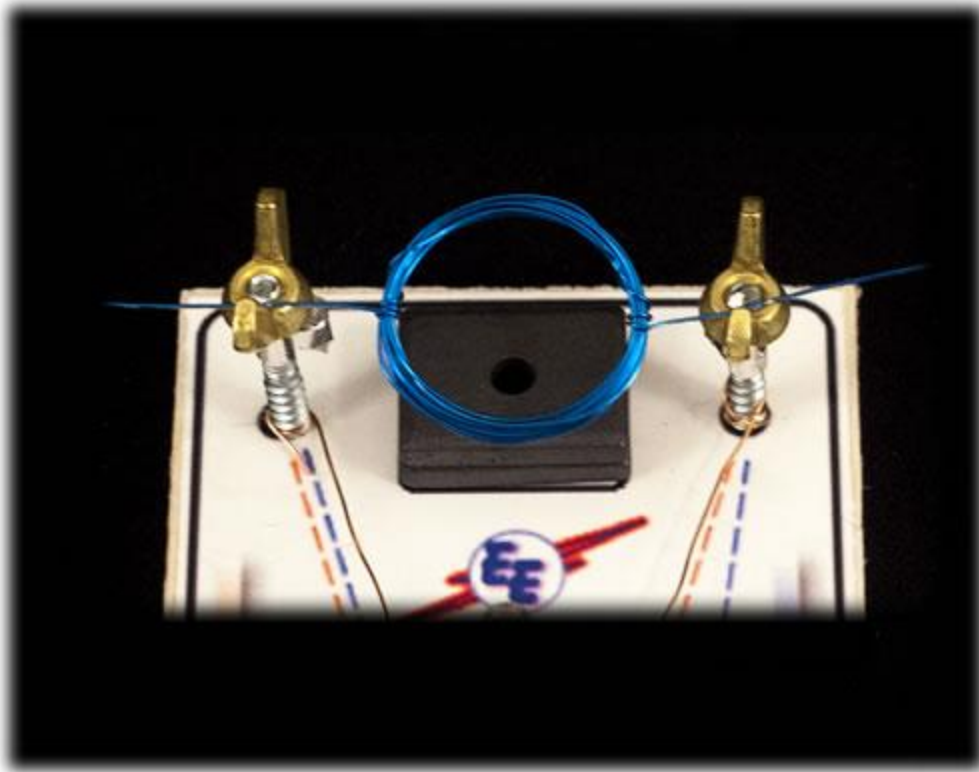
- Friction
- Displacement
- Centripetal Force
- Work
- Pulley ratios
- Power
- Inertia
- Newton's three laws of motion
- Speed & Velocity



CIRCUIT

Examples of some of the topics this project is used to study are:

- Parallel and series circuits
- Switches
- Conductors
- Insulators
- Resistors
- Open and closed circuits
- Voltage
- Batteries
- Electrical currents
- Apparatus testing



MOTOR

Examples of some of the topics this project is used to study are:

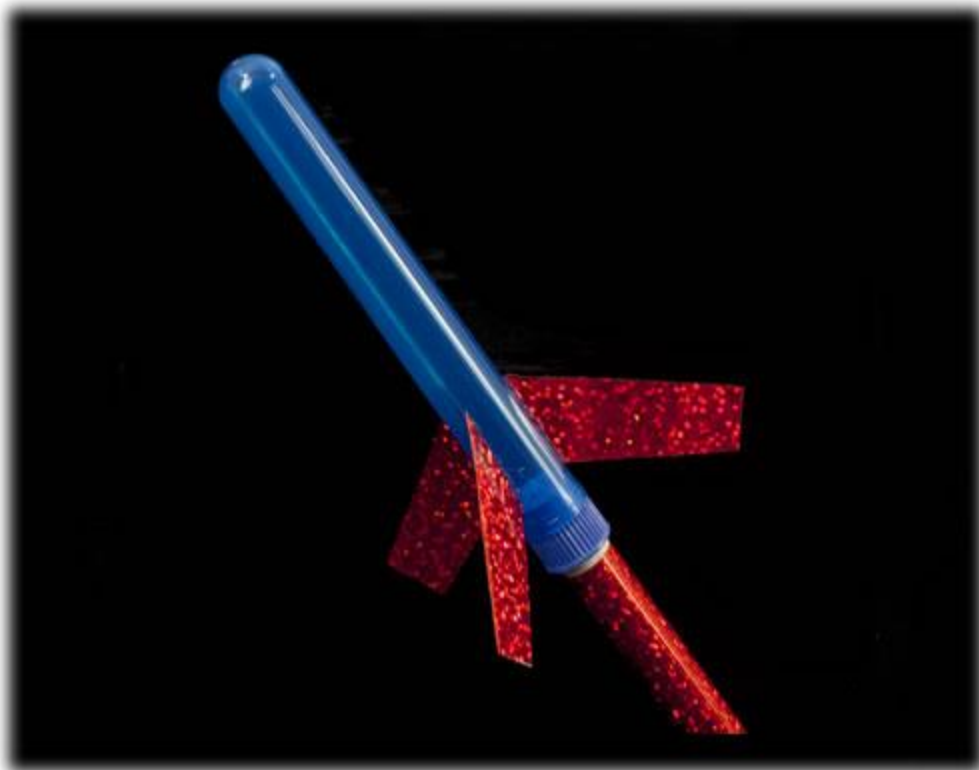
- Motors
- Generators
- Magnetic Fields
- Electromagnetism
- Electrons
- Polarity
- Windings
- Armatures/brushes
- Fixed magnets
- DC current



BALANCE SCALE

Examples of some of the topics this project is used to study are:

- Mass
- Elements
- Salts
- Chemical bonds
- Conservation of matter
- Chemical reactions
- Mixtures
- Crystals



ROCKET

Examples of some of the topics this project is used to study are:

- Chemical reactions
- Rocketry
- Variables and constants in experiments
- Products of chemical reactions
- Endothermic
- Exothermic



UNO-GUITAR

Examples of some of the topics this project is used to study are:

- Sound energy
- Echoes
- Absorption
- Pitch
- Tone
- Sound waves
- Sound mediums
- Vibration



SOLAR FAN

Examples of some of the topics this project is used to study are:

- Light sources
- Scattering light
- Shadows
- Reflection
- Refraction
- Radiant light
- Photons
- Transparent, translucent, opaque